

Simple examples outputs on how we use the tool:

Example-1: Sending and Receiving Messages without any coding using commands

Example-2: Using Python to send messages to Kafka.

Example-3: Creating a registration.html page.

Example1: sending and receiving messages without any coding using commands.

```
Windows PowerShell
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PS C:\Users\moksh> cd ..
PS C:\Users> cd ..
PS C:\> cd kafka
PS C:\kafka> .\bin\windows\kafka-server-start.bat .\config\server.properties
[2024-11-19 14:26:35,119] INFO Registered kafka:type=kafka.Log4jController MBean (kafka.utils.Log4jControllerRegistration$)
[2024-11-19 14:26:35,462] INFO Setting -D jdk.tls.rejectClientInitiatedRenegotiation=true to disable client-initiated TLS renegotiation (org.apache.zookeeper.x.common.X509Util)
[2024-11-19 14:26:35,606] INFO starting (kafka.server.KafkaServer)
[2024-11-19 14:26:35,607] INFO Connecting to zookeeper on localhost:2181 (kafka.server.KafkaServer)
[2024-11-19 14:26:35,675] INFO [ZooKeeperClient Kafka server] Initializing a new session to localhost:2181. (kafka.zookeeper.ZooKeeperClient)
[2024-11-19 14:26:35,697] INFO Client environment:zookeeper.version=3.8.4-9316c2a7a97e166d8f4593f34dd6fc36ecc436c, built on 2024-02-12 22:16 UTC (org.apache.zookeeper.ZooKeeper)
[2024-11-19 14:26:35,697] INFO Client environment:host.name=DivyaReddy.mynetworksettings.com (org.apache.zookeeper.ZooKeeper)
[2024-11-19 14:26:35,699] INFO Client environment:java.version=23.0.1 (org.apache.zookeeper.ZooKeeper)
[2024-11-19 14:26:35,699] INFO Client environment:java.vendor=Oracle Corporation (org.apache.zookeeper.ZooKeeper)
[2024-11-19 14:26:35,699] INFO Client environment:java.home=C:\Program Files\Java\jdk-23 (org.apache.zookeeper.ZooKeeper)
[2024-11-19 14:26:35,700] INFO Client environment:java.class.path=C:\kafka\libs\activation-1.1.1.jar;C:\kafka\libs\aopalliance-repackaged-2.6.1.jar;C:\kafka\libs\argparse4j-0.7.0.jar;C:\kafka\libs\audience-annotations-0.12.0.jar;C:\kafka\libs\caffeine-2.9.3.jar;C:\kafka\libs\commons-beanutils-1.9.4.jar;C:\kafka\libs\commons-cli-1.4.jar;C:\kafka\libs\commons-collections-3.2.2.jar;C:\kafka\libs\commons-digester-2.1.jar;C:\kafka\libs\commons-io-2.14.0.jar;C:\kafka\libs\commons-lang3-3.12.0.jar;C:\kafka\libs\commons-logging-1.2.jar;C:\kafka\libs\commons-validator-1.7.jar;C:\kafka\libs\connect-api-3.9.0.jar;C:\kafka\libs\connect-basic-auth-extension-3.9.0.jar;C:\kafka\libs\connect-file-3.9.0.jar;C:\kafka\libs\connect-json-3.9.0.jar;C:\kafka\libs\connect-mirror-3.9.0.jar;C:\kafka\libs\connect-mirror-client-3.9.0.jar;C:\kafka\libs\connect-runtime-3.9.0.jar;C:\kafka\libs\connect-transforms-3.9.0.jar;C:\kafka\libs\error-prone-annotation-2.10.0.jar;C:\kafka\libs\hk2-api-2.6.1.jar;C:\kafka\libs\hk2-location-2.6.1.jar;C:\kafka\libs\hk2-utils-2.6.1.jar;C:\kafka\libs\.jackson-annotations-2.16.2.jar;C:\kafka\libs\jackson-core-2.16.2.jar;C:\kafka\libs\jackson-databind-2.16.2.jar;C:\kafka\libs\jackson-dataformat-csv-2.16.2.jar;C:\kafka\libs\jackson-module-aspectj-2.16.2.jar;C:\kafka\libs\jackson-module-jaxrs-base-2.16.2.jar;C:\kafka\libs\jackson-module-jaxrs-provider-2.16.2.jar;C:\kafka\libs\jackson-module-jakarta-activator-2.16.2.jar;C:\kafka\libs\jackson-module-javax-annotations-2.16.2.jar;C:\kafka\libs\jackson-module-scala-2.13-2.16.2.jar;C:\kafka\libs\jakarta.activation-api-1.2.2.jar;C:\kafka\libs\jakarta.annotation-api-1.3.5.jar;C:\kafka\libs\jakarta.inject-2.6.1.jar;C:\kafka\libs\jakarta.validation-api-2.0.2.jar;C:\kafka\libs\jakarta.ws.rs-api-2.1.6.jar;C:\kafka\libs\jakarta.xml.bind-api-2.3.3.jar;C:\kafka\libs\javassist-3.29.2-GA.jar;C:\kafka\libs\javax.activation-api-1.2.0.jar;C:\kafka\libs\jaxws-annotation-api-1.3.2.jar;C:\kafka\libs\jaxws-servlet-api-3.1.0.jar;C:\kafka\libs\jaxws-ws-rs-api-2.1.1.jar;C:\kafka\libs\jaxb-2.3.1.jar;C:\kafka\libs\jersey-client-2.39.1.jar;C:\kafka\libs\jersey-common-2.39.1.jar;C:\kafka\libs\jersey-container-servlet-2.39.1.jar;C:\kafka\libs\jersey-container-servlet-core-2.39.1.jar;C:\kafka\libs\jersey-hk2-2.39.1.jar;C:\kafka\libs\jersey-server-2.39.1.jar;C:\kafka\libs\jersey-client-9.4.56.v20240826.jar;C:\kafka\libs\jetty-continuation-9.4.56.v20240826.jar;C:\kafka\libs\jetty-http-9.4.56.v20240826.jar;C:\kafka\libs\jetty-io-9.4.56.v20240826.jar;C:\kafka\libs\jetty-security-9.4.56.v20240826.jar;C:\kafka\libs\jetty-server-9.4.56.v20240826.jar;C:\kafka\libs\jetty-servlet-9.4.56.v20240826.jar;C:\kafka\libs\jetty-servlets-9.4.56.v20240826.jar;C:\kafka\libs\jetty-util-9.4.56.v20240826.jar;C:\kafka\libs\jetty-util-ajax-9.4.56.v20240826.jar;C:\kafka\libs\jlaine-2.5.1.jar;C:\kafka\libs\jopt-simple-5.0.4.jar;C:\kafka\libs\josiedl-0.9.4.jar;C:\kafka\libs\jsr305-3.0.2.jar;C:\kafka\libs\kafka-clients-3.9.0.jar;C:\kafka\libs\kafka-group-coordinator-3.9.0.jar;C:\kafka\libs\kafka-group-coordinator-api-3.9.0.jar;C:\kafka\libs\kafka-metadata-3.9.0.jar;C:\kafka\libs\kafka-raft-3.
```

```
Windows PowerShell
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PS C:\Users\moksh> cd kafka_2.13-3.9.0
PS C:\Users\moksh\kafka_2.13-3.9.0> .\bin\windows\zookeeper-server-start.bat .\config\zookeeper.properties
The input line is too long.
The syntax of the command is incorrect.
PS C:\Users\moksh\kafka_2.13-3.9.0> .\bin\windows\zookeeper-server-start.bat
USAGE: "C:\Users\moksh\kafka_2.13-3.9.0\bin\windows\zookeeper-server-start.bat" zookeeper.properties
PS C:\Users\moksh\kafka_2.13-3.9.0> .\bin\windows\zookeeper-server-start.bat C:\Users\moksh\kafka_2.13-3.9.0\config\zookeeper.properties
The input line is too long.
The syntax of the command is incorrect.
PS C:\Users\moksh\kafka_2.13-3.9.0> cd..
PS C:\Users\moksh> cd..
PS C:\Users> cd..
PS C:\> cd kafka
PS C:\kafka> .\bin\windows\zookeeper-server-start.bat .\config\zookeeper.properties
[2024-11-19 14:25:06,591] INFO Reading configuration from: .\config\zookeeper.properties (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-11-19 14:25:06,595] WARN C:\Users\moksh\kafka_2.13-3.9.0\zookeeper is relative. Prepend .\ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-11-19 14:25:06,598] INFO clientPortAddress is 0.0.0.0:2181 (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-11-19 14:25:06,598] INFO secureClientPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-11-19 14:25:06,599] INFO observerMasterPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-11-19 14:25:06,599] INFO metricsProvider.className is org.apache.zookeeper.metrics.impl.DefaultMetricsProvider (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-11-19 14:25:06,603] INFO autopurge.snapRetainCount set to 3 (org.apache.zookeeper.server.DataDirCleanUpManager)
[2024-11-19 14:25:06,603] INFO autopurge.purgeInterval set to 0 (org.apache.zookeeper.server.DataDirCleanUpManager)
[2024-11-19 14:25:06,603] INFO Purge task is not scheduled. (org.apache.zookeeper.server.DataDirCleanUpManager)
[2024-11-19 14:25:06,604] WARN Either no config or no quorum defined in config, running in standalone mode (org.apache.zookeeper.server.quorum.QuorumPeerMain)
[2024-11-19 14:25:06,606] INFO Log4j 1.2 jmx support not found; jmx disabled. (org.apache.zookeeper.jmx.ManagedUtil)
[2024-11-19 14:25:06,607] INFO Reading configuration from: .\config\zookeeper.properties (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-11-19 14:25:06,608] WARN C:\Users\moksh\kafka_2.13-3.9.0\zookeeper is relative. Prepend .\ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-11-19 14:25:06,609] INFO clientPortAddress is 0.0.0.0:2181 (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-11-19 14:25:06,609] INFO secureClientPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-11-19 14:25:06,609] INFO observerMasterPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-11-19 14:25:06,610] INFO metricsProvider.className is org.apache.zookeeper.metrics.impl.DefaultMetricsProvider (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
```

```
Windows PowerShell
PS C:\Users> cd..
PS C:\> cd kafka
PS C:\kafka> .\bin\windows\kafka-topics.bat --create --topic test --bootstrap-server localhost:9092
Created topic test.
PS C:\kafka> .\bin\windows\kafka-console-producer.bat --topic test --bootstrap-server localhost:9092
>Hi this is my first topic created to test for the DSA 5620: Group Presentations.
>.\bin\windows\kafka-console-consumer.bat --topic test --from-beginning --bootstrap-server localhost:9092
>
>
```

```
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PS C:\Users\moksh> cd..
PS C:\Users> cd..
PS C:\> cd kafka
PS C:\kafka> .\bin\windows\kafka-console-consumer.bat --topic test --from-beginning --bootstrap-server localhost:9092
Hi this is my first topic created to test for the DSA 5620: Group Presentations.
.\bin\windows\kafka-console-consumer.bat --topic test --from-beginning --bootstrap-server localhost:9092
```

Example-2: sending and receiving messages Using Python:

```
Command Prompt
Microsoft Windows [Version 10.0.22631.4460]
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C:\Users\moksh>cd..

C:\Users>cd..

C:\>pip instal confluent-kafka
ERROR: unknown command "instal" - maybe you meant "install"

C:\>pip install confluent-kafka
Collecting confluent-kafka
  Downloading confluent_kafka-2.6.1-cp312-cp312-win_amd64.whl.metadata (52 kB)
    52.0/52.0 kB 247.2 kB/s eta 0:00:00
  Downloading confluent_kafka-2.6.1-cp312-cp312-win_amd64.whl (3.9 MB)
    3.9/3.9 MB 22.6 MB/s eta 0:00:00
Installing collected packages: confluent-kafka
Successfully installed confluent-kafka-2.6.1

[notice] A new release of pip is available: 24.0 -> 24.3.1
[notice] To update, run: python.exe -m pip install --upgrade pip

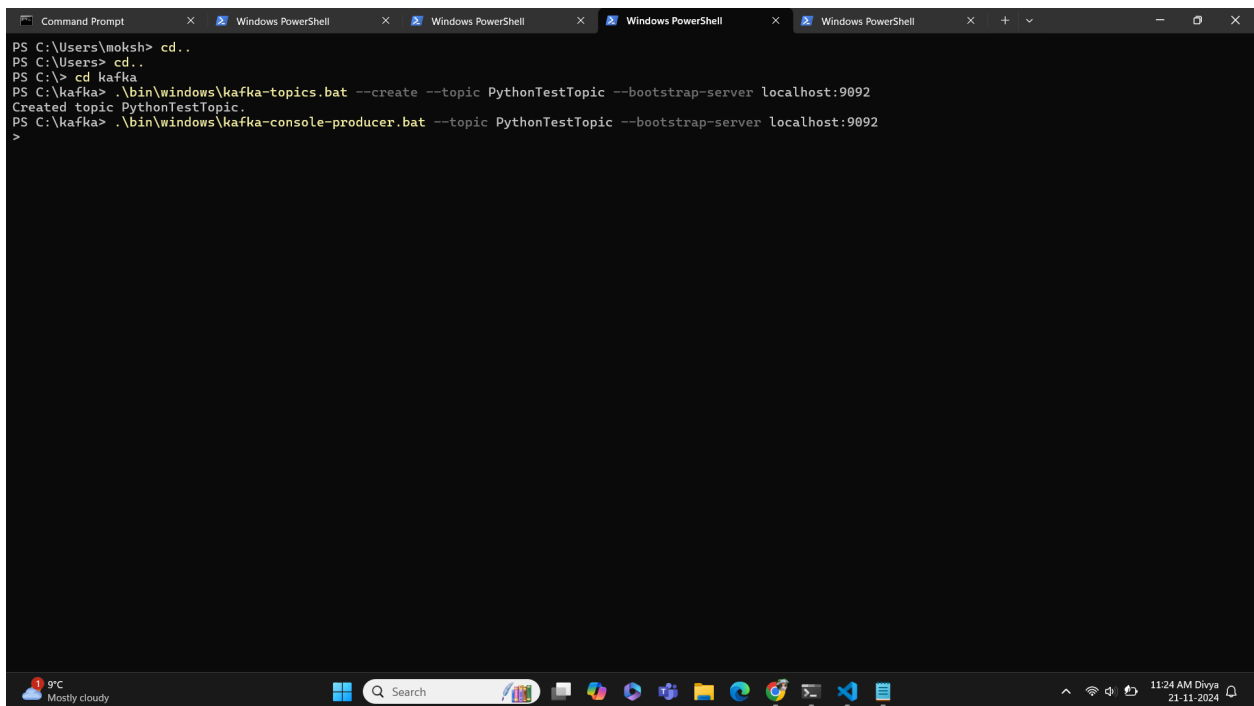
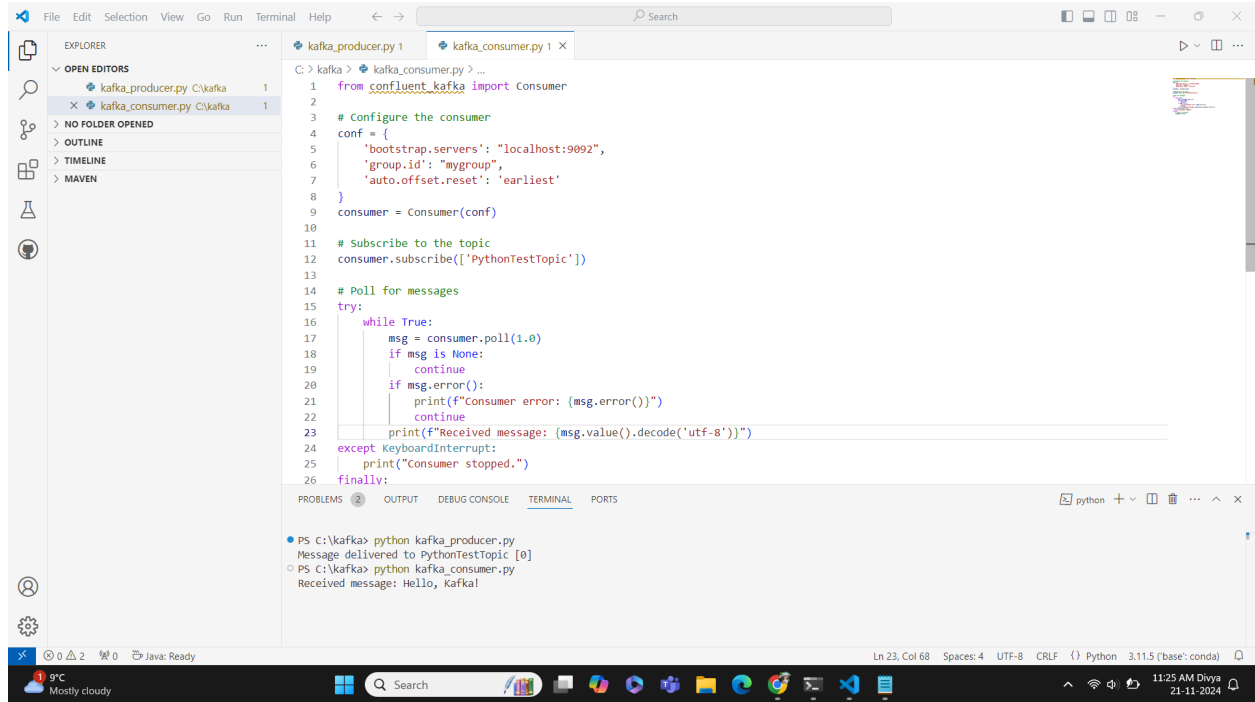
C:\>
```

```
File Edit Selection View Go Run Terminal Help
kafka_producer.py 1 x kafka_consumer.py 1

C:\kafka> kafka_producer.py 1 ...
1 from confluent_kafka import Producer
2
3 # Configure the producer
4 conf = {'bootstrap.servers': 'localhost:9092'}
5 producer = Producer(**conf)
6
7 # confirm message delivery
8 def delivery_report(err, msg):
9     if err is not None:
10         print(f"Message delivery failed: {err}")
11     else:
12         print(f"Message delivered to {msg.topic()} [{msg.partition()}]")
13
14 # Produce a message
15 producer.produce('PythonTestTopic', key="key", value="Hello, Kafka!", callback=delivery_report)
16
17 producer.flush()
18

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
python

PS C:\kafka> python kafka_producer.py
Message delivered to PythonTestTopic [0]
PS C:\kafka> python kafka_consumer.py
Received message: Hello, Kafka!
```



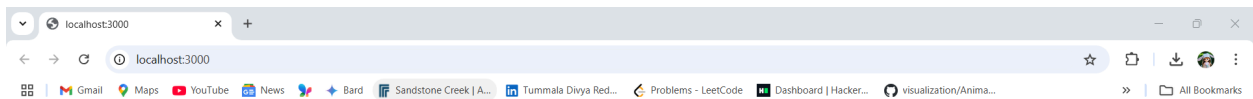
```
Command Prompt
PS C:\Users\moksh> cd..
PS C:\Users> cd..
PS C:\> cd kafka
PS C:\kafka> .\bin\windows\kafka-console-consumer.bat --topic PythonTestTopic --from-beginning --bootstrap-server localhost:9092
Hello, Kafka!
```

Example-3: Creating a registration.html page.

Used: Node js, Mongodb, Postman

```
File Edit Selection View Go Run Terminal Help
user-registration
EXPLORER
  kafka-mongodb-registration
    consumer.js
    package.json
    producer.js
    bson.js
  USER-REGISTRATION
    kafka-mongodb-registration
      node_modules
      consumer.js
      index.html
      package-lock.json
      package.json
      producer.js
  kafka-mongodb-registration > JS producer.js > ...
  44
  45 // Route for the root path (GET /)
  46 app.get('/', (req, res) => {
  47   res.send('Welcome to the Kafka Producer API!');
  48 });
  49
  50 app.listen(PORT, () => {
  51   console.log(`Server running on http://localhost:${PORT}`);
  52 });
  53

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
node - kafka-mongodb-registration
PS C:\Users\moksh\OneDrive\Documents\divya\OneDrive\Desktop\user-registration> cd kafka-mongodb-registration
PS C:\Users\moksh\OneDrive\Documents\divya\OneDrive\Desktop\user-registration\kafka-mongodb-registration> node producer.js
Server running on http://localhost:3000
Kafka Producer is connected and ready.
(node:15664) [MONGODB DRIVER] warning: useUnifiedTopology is a deprecated option: useUnifiedTopology has no effect since Node.js Driver version 4.0.0 and will be removed in the next major version
(Use 'node --trace-warnings ...' to show where the warning was created)
Connected to MongoDB
```



Welcome to the Kafka Producer API!

